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16. Abstract An efficient and accurate inventory of a state highway agency's assets, along with the means to assess the condition of those assets and model their performance, is critical to enabling an agency to make informed investment decisions in a Transportation Asset Management (TAM) environment. Today, new technologies provide fast and improved ways to gather, process, and analyze data. The key is to identify and gather the most useful, reliable, cost-effect information and use it to make informed decisions for asset management. Four key infrastructure areas have been identified as primary asset components; pavements, bridges, geotechnical features, and roadside appurtenances. Each area contains multiple categories and data elements important for sound decision making. Although some similarities exist in these four primary categories, the nature of data collection may differ, depending on the asset type. The, sheer number of data elements and the length of asset networks for pavements and roadside appurtenances render the automated highway speed data collection method a necessity rather than a luxury. However, the discrete nature of bridges and geotechnical features make the automated mobile data collection method on a network level unfeasible with today's technology. Important issues in the collection process include precision, subjectivity and variability of the process itself, as well as speed, safety of the survey crew, proximity of the public, cost, etc. Although previous research has attempted to address these issues and determine the most appropriate method(s), the question remains as to which roadway data collection system is best for state highway agencies given real world constraints. This research set up a "sealed envelope" experiment wherein the identification, location, description, and quality of the asset data elements are known only to NCSU researchers. Vendors are informed of only the data necessary to perform their evaluation. To support this effort at 95-mile test course near Raleigh, North Carolina was identified, which contained a sampling of pavement, roadside, geotechnical and bridge elements. This document reports on the findings from the study.			
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